Major Facility Review (Title V)
Semi-Annual Monitoring Report

for

East Bay Municipal Utility District
Main Wastewater Treatment Plant
Facility #A0591

Reporting Period: January 1, 2017 – June 30, 2017

Source	Monitoring Requirement	Limit	Monitoring Results
S-55 Boiler	**Condition 20651**		
	2. Shall not operate S-55 boiler when more than two of the three cogen engines S-37, S-38, or S-39 are operating		Condition met. See Attachment 1 for boiler and engine data.
	3. Boiler gross heat input	20.41 MMBtu/hr	Condition met. See Attachment 2. Heat input ranged from 7.9-10.4 MMBtu/hr.
	5a. NOx emission from boiler 5b. CO emission from boiler	30ppm 50ppm	See 19 for test results if annual tests run in monitoring period
	18. Daily records of hours of operation, fuel consumption		See Attachment 1 for hours and gas consumption.
	19. Annual performance test for emission limits in 5		Condition met. Annual performance test completed on 12/14/16. Results submitted in last report.
S-37, S-38, S-39 Cogeneration Engines	**Condition 20651**		
	Emission limits – 6. NOx emissions from S-38 7. POC emissions from S-38 8. CO emissions from S-38 9. Filterable particulate emissions from S-38 10. NOx emissions from S-37 & S-39 11. CO emissions from S-37 & S-39	 1.25 g/hp-hr 0.6 g/hp-hr 3.0 g/hp-hr 0.085 g/hp-hr 70 ppmvd 2000 ppmvd	For items 6-11 see 19 for test results if annual tests run in monitoring period
	13. Thermal throughput per engine	25 MMBtu/hr	Condition met. See Attachment 2.
	14. Combined hours of operation for S-37, S-38, and S-39	25,316 hours in any rolling 365 day period	Condition met. 12,856 hours in last year. See Attachment 2. Jan-Jun 2017: 7,716 hours Jul-Dec 2016: 5,140 hours
	15. Combined diesel consumption for S-37, S-38, and S-39	150,000 gallons in any rolling 365 day period	Condition met. 22,349 gallons in last year. See Attachment 2. Jan-Jun 2017: 13,614 gallons Jul-Dec 2016: 8,735 gallons

Source	Monitoring Requirement	Limit	Monitoring Results
S-37, S-38, S-39 Cogeneration Engines (continued)	18. Daily records of hours of operation, fuel consumption 19. Annual performance test for emission limits in 6-11		Condition met. See Attachment 1 for records. Condition met for engine #1. Annual performance test completed 4/21/17. See Attachment 3 for report. Engine #2 was out of service during reporting period.
S-48 Gasoline Dispensing Facility	**Condition 25107** The Static Pressure Performance Test (Leak Test) ST-38 shall be successfully conducted at least once in each twelve consecutive month period.		Condition met. Completed on 11/14/16. Test results submitted in previous semiannual report.
	Condition 21663 Annual gasoline throughput	334,000 gal per year	Condition met. 30,665 gal in last year. See Attachment 4. Jan-June 2017: 12,542 gal July-Dec 2016: 18,123 gal
S-50 Diesel Engine Back-up Generator	**Condition 22830** 1. Hours of operation	30 hours/year reliability-related hours	Condition met. Generator did not run in last 12 months. Refer to Attachment 5.
S-51 Diesel Engine Back-up Generator	**Condition 22850** 1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator ran 14.6 hours in last 12 months. Refer to Attachment 5.
S-52 Diesel Engine Back-up Generator (SOURCE REMOVED, FORM DDU SUBMITTED 6/2/17)	**Condition 22820** 1. Hours of operation.	20 hours/year reliability-related hours	Condition met. Generator ran 0.1 hours in last 12 months. Refer to Attachment 5.
	Condition 19184 (BAAQMD permit) 2. Diesel fuel – sulfur content	<0.005% by weight	Condition met. All deliveries of diesel to Plant were CARB ULSD, 15ppm sulfur or less. See Attachment 6.
S-53 Diesel Engine Back-up Generator	**Condition 22830** 1. Hours of operation	30 hours/year reliability-related hours	Condition met. Generator ran 1.1 hours in last 12 months. Refer to Attachment 5.

Source	Monitoring Requirement	Limit	Monitoring Results
S-54 Diesel Engine Back-up Generator	**Condition 22850**		
	1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator ran 1 hour in last 12 months. Refer to Attachment 5.
S-56 Turbine	**Condition 24050**		
	2. Total combined heat input	389,820 MMBtu in any 12-month period	Condition met. 338,219 MMBtu in last 12 months. Refer to Attachment 2. Jan-Jun 2017: 168,720 MMBtu Jul-Dec 2016: 169,499 MMBtu
	3. NOx emission limits	23 ppm (15-min) 34,400 lb (12-mo)	Emission limits met. Refer to Attachments 2 and 7. Annual mass emission: 13,562 lb Jan-Jun 2017: 6,836 lb Jul-Dec 2016: 6,726 lb
	4. CO emission limit	100 ppm (15-min) 92,200 lb (12-mo)	Emission limits met. Refer to Attachment 2 and 7. Annual mass emission: 2,481 lb Jan-Jun 2017: 1,250 lb Jul-Dec 2016: 1,230 lb
	5. SO2 emission limit	150 ppmv	Emission limit met. Refer to Attachments 2 and 7.
	7. Annual turbine source test		Condition met. Turbine annual test done on 12/14/16 by Blue Sky Environmental. Results submitted in last report.
	8. Monthly NOx and CO test		Condition met. Monthly test results are located in Attachment 7.
S-58 Diesel Engine Back-up Generator (START-UP/PERMIT DATE 4/20/17)	**Condition 22850**		
	1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator ran 0.9 hours in last 12 months. Refer to Attachment 5.
S-100 Municipal Wastewater Treatment Plant	**Condition 21759**		
	1. Total wastewater flow	120 MGD monthly dry weather average 325 MGD monthly wet weather average	Condition met. Maximum wet weather monthly flow in period was 122 MGD influent. Maximum dry weather monthly flow was 73 MGD. See Attachment 8.

Source	Monitoring Requirement	Limit	Monitoring Results
S-110 Headworks **A-461 & A-462 Carbon Bed Scrubbers**	**Condition 17335** 3. Inlet and outlet H2S concentrations of carbon beds, as well as any other appropriate operating parameters shall be continuously monitored and reviewed on a daily basis to determine when carbon adsorption bed breakthrough is imminent or has been reached.		Monitoring results for inlet and outlet H2S and any noted outages are in Attachment 9. Maintenance records for scrubber are in Attachment 10.
S-170 Sludge handling	**Condition 18006** 1. Monitor and record on a daily basis the activated sewage sludge throughput through S-170.		Sludge throughput is recorded in Attachment 12. Maintenance records for the scrubber are in Attachment 10.
S-180 Anaerobic Digesters (PERMIT CONDITION UPDATE 3/15/17)	**Condition 18860** 2. Monthly inspection of digesters and gas management/venting prevention		One venting incident occurred on 6/4/17 and was reported to BAAQMD. Inspections were conducted by Operations on daily rounds.
Note: A-194, A-195 are new enclosed flares within start-up period	3. Sulfur content of digester gas	< 340 ppmv until 3/14/17 <200 ppmv annual average after 3/15/17	Conditions met. Refer to Attachment 12 for the H2S gas sampling records.
A-190, A-191, A-192, and A-193 are older flares	4. Combined digester gas flow rate to combustion sources	<3,400 scfm annual average	Condition met. See Attachment 13 for combined digester gas flow rates.
	5. Combustion zone temperature monitoring to A-194, A-195	>1,500F, 3-hr average	Flare not being used for operations – testing only
	6. Gas flow to A-194, A-195	<3,000 cfm, 1-hr average	Condition met. See Attachment 2 for max flow rates.
	7. Source testing of A-194, A-195 (every 8,760 hours of use or 5 years)		Flare not being used for operations – testing only

Source	Monitoring Requirement	Limit	Monitoring Results
S-180 Anaerobic Digesters (continued)	Emission limits for A-194, A-195 9. NOx limit 10. CO limit 11. H2S limit 12. Weekly sampling and testing of digester gas for H2S 13. Hours of flaring per day	 0.06 lb/MMBtu 0.20 lb/MMBtu 0.032 lb/hour	 Flare not being used for operations – testing only Refer to Attachment 12. Refer to Attachment 1 for the hours of flaring per day.

Attachment Index:

1 Combustion Source Air Permit Data
2 Combustion Summaries – Boiler, Engines, Turbine, Flares
3 Annual Source Test Summaries: Engine #1
4 Gasoline Facility Throughput
5 Hours of Operation for Stand-by Emergency Generators
6 Diesel Deliveries with Sulfur Content Certifications
7 Turbine Monthly Test Results
8 Monthly Wastewater Summary January-June 2017
9 IPS Carbon Bed Inlet/Outlet H2S Readings
10 Odor Scrubber Maintenance Records for S-170 and S-110
11 Activated Sludge Throughput for S-170
12 Digester Gas H2S Sampling
13 Combined Digester Gas Combustion Volumes